

WHAT IS CLAIMED IS:

1. A dual band linear antenna array, comprising four elongate metal plates arranged to form a rectangular array, a first opposing pair of the metal plates is longer than a second opposing pair of the metal plates,
5 wherein the length of the first opposing pair of the metal plates is one quarter wavelength of a first electric wave, and the length of the second opposing pair of metal plates is one quarter wavelength of a second electric wave, the first electric wave has a frequency lower than that of the second electric wave.
- 10 2. The antenna array of Claim 1, wherein the roots of the metal plates are serially connected to a signal feed terminal, and the conductors are connected to a copper tube via a coaxial cable external conductor.
3. The antenna array of Claim 1, wherein the metal plates include non-insulated bare plates.
- 15 4. The antenna array of Claim 1, wherein the metal plates are made of iron or copper.
5. The antenna array of Claim 1, further comprising a connecting board to connect roots of the metal plates.
6. The antenna array of Claim 1, further comprising a positioning
20 member clipped between top portions of the metal plates.
7. The antenna array of Claim 6, wherein the positioning member is made of elastic foam or rubber.
8. A dual band linear antenna array, comprising three elongate metal plates arranged to form an open rectangular array, one of the metal
25 plates is longer than the other two metal plates, wherein the length of the longer metal plate is one quarter wavelength of a first electric wave, and the

length of the other two metal plates is one quarter wavelength of a second electric wave, the first electric wave has a frequency lower than that of the second electric wave.

9. The antenna array of Claim 8, wherein the roots of the metal
5 plates are serially connected to a signal feed terminal, and the conductors are connected to a copper tube via a coaxial cable external conductor.

10. The antenna array of Claim 8, wherein the metal plates include non-insulated bare plates.

11. The antenna array of Claim 8, wherein the metal plates are
10 made of iron or copper.

12. The antenna array of Claim 8, further comprising a connecting board to connect roots of the metal plates.

13. The antenna array of Claim 8, further comprising a positioning member clipped between top portions of the metal plates.

15 14. The antenna array of Claim 13, wherein the positioning member is made of elastic foam or rubber.